

Module Handbook

Module Name	Food and Agricultural Products Analysis Lab Work					
Module Level	Higher Diploma					
Code, if applicable	VKT434					
The subtitle, if applicable						
Courses, if applicable						
Semester(s) in which the module is taught	4 th semester					
A person responsible for the module	Bayu Wiyantoko, M.Sc.					
Lecturer	Bayu Wiyantoko, M.Sc. Tri Esti Purbaningtias, M.Si.					
Language	Bahasa Indonesia					
Relation to curriculum	Compulsory					
Type of teaching, contact hours	Laboratory Practice (teaching, preparation, lab work, data analysis and report) and Exams: 5.7 hours x 16 week					
Workload	Total Workload	91 hours; 2 CU				
		Face to face teaching	Laboratory preparation	Laboratory work	Data analysis and report	Exam (Theory and Practice)
	Hours	11	11	50	11	8
Credit Points	2 CU/3.4 ECTS					
Requirements according to the examination regulations	100% of requirements attendance in laboratory work					
Recommended prerequisites	Analytical Chemistry Lab Work					
Module objectives/intended learning outcomes	<p>PLO 5: Students are able to contribute to solving problems in the scope of work</p> <p>PLO 7: Students can select and carry out chemical analysis methods and operate instruments by applying the principles of chemical occupational health and safety</p> <p>PLO 9: Students are able to carry out validation and verification of testing methods</p> <p>Subject LO:</p> <p>Students are able to design and carry out verification tests on foodstuffs and agricultural products</p> <p>Students are able to carry out sample preparation procedures on chemical testing of foodstuffs and agricultural products</p> <p>Students are able to analyze components in foodstuff samples and agricultural products</p> <p>Students are able to apply procedures for testing food and agricultural products with standard and non-standard methods</p> <p>Students are able to determine and implement the test method according to the characteristics of the sample both instrumental and non-instrumental</p>					

	<p>Students are able to build teamwork in carrying out laboratory procedures</p> <p>Students are able to analyze data and report test results in writing and orally</p> <p>Students are able to apply principles and build a culture of chemical safety and health</p>
Content	<ol style="list-style-type: none"> 1. Food sampling 2. Proximate analysis 3. Vitamin analysis 4. Metabolite material analysis 5. Analysis of food additives and food contamination 6. Conventional and instrumentation analysis
Study and examination requirements and forms of examination	<p>Assessment lab work (55%), team work (10%), analysis and report (25%), safety lab (10%)</p>
Media employed	<p>Google classroom, youtube, zoom meeting, google form, google doc, standard method, laboratory handbook</p>
Reading list	<ol style="list-style-type: none"> 1. Apriyantono, A., Dedi F., Ni Luh P., Sedar N., Slamet B., 1989, Analisis Pangan, Departemen Pendidikan dan Kebudayaan, Direktorat Jenderal Pendidikan Tinggi, Pusat Antar Universitas Pangan dan Gizi, Institut Pertanian Bogor 2. Charley, H., Weaver, C., 1998, Foods, A Scientific Approach. Prentice-Hall, Inc., New Jersey 3. deMan, J.M., 1999, Principles of Food Chemistry, Aspen Publishers, Inc. Gaithersburg, Maryland 4. Fennema, O.R., 1996, Food Chemistry, Marcel Dekker, Inc., New York 5. Meyer, L.H. (1973). Food Chemistry, Reinhold Corporation, New York 6. Pomeranz, Y, Meloan, C.E., 1994, Food Analysis: Theory and Practice 3rd Ed., Chapman and Hall, New York 7. Sudarmadji, S., Haryono, B., 1997, Suhardi, Prosedur Analisis untuk Bahan Makanan dan Pertanian, Liberty, Yogyakarta 8. Winarno, F.G., 1997. Kimia Pangan dan Gizi. PT Gramedia, Jakarta